



Memorandum

To: MLDS Governing Board

From: Tejal Cherry, Chief Information Officer

Date: February 22, 2018

Subject: Location and Hosting of MLDS Data Center

Background

The Department of Information Technology (DoIT) has been in the process of establishing an enterprise system to more efficiently manage state information technology resources. The MLDS Center has adopted various enterprise services, including the managed firewall, VPN services, laptop/desktop encryption, and software patching.

The next step in the implementation of the enterprise management system would be to move the MLDS data center from MSDE to the DoIT Enterprise Data Center (EDC). The purpose of this memorandum is to assess whether moving to the EDC is the best way to manage the Center's data system and support the operations of the Center. Complicating matters is the fact the Center shares various resources with MSDE. MSDE Office of Information Technology (OIT) provides certain network management and support services to the Center. The Center also shares its Oracle license with MSDE OIT. MSDE OIT is also considering moving a portion of its IT operations to the EDC (MSDE has other data systems that are currently not planning to move to the EDC). If MSDE OIT stops supporting the MLDS data center, or if MSDE OIT moves to the EDC, the Center would not be able to share the costs of the Oracle license. The cost of the Oracle license for the Center independent of MSDE OIT is approximately \$400,000.

Analysis

The EDC offers several important benefits to the Center.

1. The the EDC at the [TierPoint](#) facility in Baltimore offers robust physical security, including:
 - a. 24x7 video surveillance;
 - b. Gated entrance to the building;
 - c. Building access requires a registered proxy card for entry;
 - d. Required sign-in with the building manager;
 - e. Access to the data center requires a registered proxy card holder as well as a biometric hand scan;
 - f. Once in the data center, a cage surrounds the server environment which also requires a registered proxy card for entry;
 - g. Barbed wire surrounds the top of the building to prevent roof-top entry; and
 - h. The building has multiple generators that can run the facility in the event of a power failure.
2. DoIT conducts criminal history background checks for personnel accessing the system to meet the Center's additional security requirements.
3. The EDC has the capacity to increase the Center's storage space as needed.

4. The data system's performance will improve due to other integrated services provided by DoIT (firewall, VPN, Encryption for servers/desktops/laptops, and regular patches).
5. DoIT will be responsible for firewalls, servers, storage, anti-virus, and software upgrades in compliance with statewide standards.
6. DoIT employs a full time Certified Information System Security Professional to ensure the EDC is managed to the highest security standards.
7. DoIT will support all aspects of the decommissioning of the Center's existing environment at MSDE.

Center staff have identified several concerns about moving to the EDC, including:

1. Center staff will lose some control of the network environment;
2. Center staff will have to depend on the DoIT network operations center and service operations center to resolve issues, which may take more time than having Center staff directly address issues;
3. Currently, the EDC only supports SQL data environments, not Oracle, which raises concerns about the level of support and expertise at DoIT to manage the more complex Oracle environment;
4. There is no resolution on the Oracle licensing issues;
5. DoIT's long term plans for providing Oracle services are unclear and may include moving to an Oracle cloud solution; and
6. DoIT has still not responded to the Center's proposed terms for a Service Level Agreement or provided their own SLA that would establish expectations and terms of service.

Finally, there are also issues with staying at MSDE OIT. MSDE OIT has limited capacity to assist the Center because a significant number of MSDE OIT resources have been transferred to DoIT as part of the enterprise management plan. The Center is currently in need of additional hardware to manage storage and provide additional capacity. The Center requested assistance to install hardware 10 months ago and it has not been accomplished.

Conclusion and Recommendation

At this time, there are too many unknowns to make a final recommendation on how to proceed. I think the DoIT EDC offers a number of advantages for a small agency, like the Center. Having the robust network and security supports that DoIT can provide would be advantageous to the Center. However, the level of access and visibility Center staff will have into the operations and management of the System, once in the EDC, is unknown. The Center does not want to be back in a data center like the one at the Department of Public Safety and Correctional Services (DPSCS). That data center did not provide staff access to the System or provide ways to ensure security protocols were being met. The Center's service level agreement addresses these concerns and outlines each agency's responsibilities. Accordingly, until the service level agreement terms are finalized, the Center cannot determine how best to proceed.

Additionally, the issues surrounding Oracle licensing and the long term plans for supporting the continued use of Oracle must be resolved before the Center can make any determination. Oracle is the platform for the MLDS and is crucial to the continued operations of the System and Center.

In January, Ross Goldstein and I had the opportunity to meet with DoIT Secretary Leahy. Mr. Leahy understands the importance of the SLA and has his team working (with our input) on determining the best way forward with Oracle. I am confident that we should have answers to the outstanding issues within the coming months and will be able to provide you with a final recommendation.